

14243000 COWLITZ RIVER AT CASTLE ROCK, WALower Columbia Basin
Lower Cowlitz Subbasin

LOCATION.--Lat 46°16'30", long 122°54'48" referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.10, T.9 N., R.2 W., Cowlitz County, WA, Hydrologic Unit 17080005, on left bank 40 ft downstream from Arkansas Valley Road bridge in Castle Rock, 2.7 mi downstream from Toutle River, and at mile 17.3.

DRAINAGE AREA.--2,238 mi², A large debris avalanche generated by the eruption of Mount St. Helens on May 18, 1980 blocked tributaries in the upper North Fork Toutle River valley. As a result, from May 19, 1980 to July 7, 1981, approximately 40 mi² was noncontributing. From July 7, 1981 to October 1981, the Coldwater Lake release, approximately 21 mi², was noncontributing. From October 1981 to November 1982, the Castle Lake release, approximately 19.7 mi², was noncontributing. Since November 1982, all areas, including the Spirit Lake release, are effectively contributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--December 1926 to current year; October 1985 to April 2000 (seasonal records).

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1638: 1947(P), 1951.

GAGE.--Water-stage recorder. Datum of gage is NAVD of 1988. Prior to Dec. 18, 1933, nonrecording gage at site 2 mi upstream at datum 38.58 ft higher. Dec. 18, 1933, to June 13, 1934, nonrecording gage, and June 14 to Sept. 30, 1934, water-stage recorder, at present site at datum 28.65 ft higher. Oct. 1, 1934, to May 21, 1980, water-stage recorder, on right bank at datum 23.65 ft higher. May 23, 1980, to July 29, 1997, water-stage recorder at present site at datum 23.65 higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Riffe Lake (station 14234800) at mile 65.5, and Mayfield Reservoir (station 14237800) at mile 52.0. Minor diversions for domestic and farm use upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--64 years (water years 1928-85, 2001-06), 9,126 ft³/s, 55.38 in/yr, 6,612,000 acre-ft/yr, adjusted for storage in Mayfield Reservoir since April 1962, and Riffe Lake since April 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 139,000 ft³/s Dec. 23, 1933, gage height, 55.25 ft present datum, from rating curve extended above 80,000 ft³/s; maximum gage height, 55.76 ft Feb. 8, 1996; minimum discharge, 998 ft³/s Nov. 7, 8, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,200 ft³/s, Jan 30, gage height, 45.74 ft; minimum discharge, 2,900 ft³/s, Aug 27, gage height, 31.24 ft.

14243000 COWLITZ RIVER AT CASTLE ROCK, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,180	9,630	12,700	17,300	32,300	11,500	8,130	7,610	7,370	5,750	3,530	3,870
2	3,970	10,200	14,500	16,200	25,800	10,700	8,160	7,670	8,720	4,630	3,500	3,840
3	4,040	9,440	14,400	16,000	25,300	9,810	7,890	7,470	8,450	4,420	3,460	3,830
4	3,870	12,700	13,200	17,400	28,400	9,350	8,260	7,030	8,320	4,380	3,400	3,500
5	3,790	12,400	12,500	16,400	24,900	9,180	8,000	7,020	8,520	4,340	3,390	3,350
6	3,760	12,100	12,200	18,500	21,700	9,040	7,510	7,060	8,280	4,330	3,380	3,640
7	3,790	11,100	11,900	20,400	20,100	9,950	7,390	7,180	7,920	4,320	3,370	3,630
8	3,830	10,900	11,600	20,800	19,100	10,200	7,790	7,240	7,320	4,270	3,340	3,630
9	3,810	10,100	11,100	22,100	18,400	12,200	8,520	7,370	7,220	4,240	3,360	3,630
10	3,770	9,700	9,550	43,900	15,500	12,900	8,170	7,210	7,090	4,210	3,370	3,640
11	3,750	9,900	9,410	45,200	13,500	12,200	8,410	6,870	6,970	4,210	3,360	3,690
12	3,740	11,600	7,980	34,200	13,100	11,600	8,080	6,880	6,950	4,230	3,350	3,800
13	3,790	12,100	7,850	34,300	12,900	9,780	7,700	6,810	7,510	4,310	3,340	3,800
14	3,830	12,100	7,420	32,500	12,700	10,000	9,430	6,760	7,430	4,230	3,340	3,800
15	3,840	12,500	7,490	28,100	12,400	9,560	10,300	6,830	7,050	4,180	3,340	3,650
16	3,940	12,000	8,930	27,400	12,100	8,460	9,910	7,610	7,000	4,140	3,340	3,630
17	3,870	11,600	7,900	31,600	11,800	8,270	9,240	7,820	6,920	4,100	3,350	3,630
18	3,850	11,300	7,120	26,200	10,400	8,230	9,210	7,540	6,770	4,090	3,330	3,700
19	3,940	11,200	7,320	24,200	9,960	7,990	8,650	7,420	6,990	4,070	3,320	3,750
20	4,040	11,100	7,730	27,000	9,900	7,770	8,090	7,300	7,680	4,170	3,320	3,730
21	4,040	11,000	8,200	25,600	10,300	8,130	8,060	7,170	7,620	5,120	3,320	3,730
22	3,950	10,800	12,500	23,500	11,500	8,030	7,820	7,400	7,080	5,680	3,320	3,700
23	3,910	10,700	14,600	22,100	11,800	7,740	7,620	7,840	6,400	5,710	3,300	3,640
24	3,890	10,600	16,500	20,900	11,200	8,080	7,520	7,830	6,340	5,700	3,340	3,650
25	3,890	11,800	14,700	19,200	9,500	8,150	7,820	7,510	6,300	5,660	3,380	3,650
26	3,980	13,200	14,200	15,400	8,690	7,880	7,660	7,450	6,310	5,680	3,140	3,630
27	4,360	12,100	15,800	17,900	9,430	7,660	7,320	7,990	6,600	5,680	3,260	3,610
28	5,170	11,800	18,500	23,000	11,400	8,040	7,350	8,560	6,760	4,790	3,380	3,620
29	5,330	12,700	18,500	26,700	---	7,780	7,690	8,630	6,140	3,890	3,790	3,780
30	5,380	13,300	18,800	49,000	---	7,390	7,950	8,230	6,080	3,870	3,860	3,780
31	7,610	---	19,500	35,400	---	7,480	---	7,780	---	3,590	3,870	---
Total	128,910	341,670	374,600	798,400	434,080	285,050	245,650	231,090	216,110	141,990	105,450	110,530
Mean	4,158	11,390	12,080	25,750	15,500	9,195	8,188	7,455	7,204	4,580	3,402	3,684
Max	7,610	13,300	19,500	49,000	32,300	12,900	10,300	8,630	8,720	5,750	3,870	3,870
Min	3,740	9,440	7,120	15,400	8,690	7,390	7,320	6,760	6,080	3,590	3,140	3,350
Ac-ft	255,700	677,700	743,000	1,584,000	861,000	565,400	487,200	458,400	428,700	281,600	209,200	219,200
Mean adjusted for change in contents in Riffe Lake and Mayfield Reservoir												
	2,508	9,566	12,170	28,120	13,810	7,702	9,435	11,720	9,964	3,908	2,007	1,608
CFSM adjusted for change in contents in Riffe Lake and Mayfield Reservoir												
	1.12	4.27	5.44	12.56	6.17	3.44	4.22	5.24	4.45	1.75	0.90	0.72
In. adjusted for change in contents in Riffe Lake and Mayfield Reservoir												
	1.29	4.77	6.27	14.49	6.43	3.97	4.70	6.04	4.97	2.01	1.03	0.80
AC-FT adjusted for change in contents in Riffe Lake and Mayfield Reservoir												
	154,200	569,200	748,400	1,729,000	767,100	473,600	561,400	720,600	592,900	240,300	123,400	95,700

14243000 COWLITZ RIVER AT CASTLE ROCK, WA—Continued

	Calendar Year 2005	Water Year 2006
Total	2,474,830	3,413,530
Mean	6,780	9,352
Max	25,300	49,000
Min	2,850	3,140
Ac-ft	4,909,000	6,771,000
Mean adjusted for change in contents in Riffe Lake and Mayfield Reservoir	6,662	9,359
CFSM adjusted for change in contents in Riffe Lake and Mayfield Reservoir	2.98	4.18
In. adjusted for change in contents in Riffe Lake and Mayfield Reservoir	40.42	56.78
AC-FT adjusted for change in contents in Riffe Lake and Mayfield Reservoir	4,823,000	6,776,000

